

1 14. The integrated circuit chip package of claim 12, wherein at least one other of the
2 electrically isolated regions of the metal substrate core is coupled with an analog ground
3 of the integrated circuit chip.

1 15. The integrated circuit chip package of claim 12, wherein at least one other of the
2 electrically isolated regions of the metal substrate core is coupled with an operating
3 voltage rail of the integrated circuit chip, and at least one other of the electrically isolated
4 region of the metal substrate core is coupled with an analog ground of the integrated
5 circuit chip.

1 16-20. *Please cancel claims 16-20, without prejudice.*

REMARKS

This response is provided to the Office Action of **May 27th, 2003**. In the Action, a restriction requirement was made distinguishing claims 1-15 (Group I) from claims 16-20 (Group II). In addition, in light of a provisional election of Group I, claims 1-15 were rejected pursuant to 35 USC §102(b) (claims 1 and 2), and 35 USC §103(a) (claims 3-15).

With this response, Applicant formally confirms the election of Group I, and has cancelled the claims of Group II (16-20) without prejudice. Accordingly, with this response claims 1-15, as originally filed, remain pending.

In response to the substantive rejection of claims 1-15, Applicant respectfully offers the following remarks effectively traversing the rejection of such claims. In view of the arguments that follow, reconsideration of the above captioned application is respectfully requested.

Restriction Requirement

In **paragraphs 1 through 5** of the Action, claims 1-15 were distinguished from claims 16-20 as being drawn to different inventions.

Without adopting the classification or characterization of the claims in the Action, or the appropriateness of the restriction requirement, Applicant confirms the provisional election of Group I (claims 1-15) for continued prosecution herein. Accordingly, Applicant has cancelled claims 16-20 (Group II), as above, without prejudice.

102(b) Rejections

In **paragraph 7** of the Action, claims 1 and 2 were rejected as being anticipated by a patent issued to Patil, et al. (USP 5,672,911) under 35 USC §102(b). In response, Applicant traverses the rejection of such claims.

In order to make a prima facie basis of anticipation under 35 USC §102(b), the cited reference must disclose each and every element of the rejected claim as presented in the claim. In this case, Applicant respectfully submits that the Action fails to show how the Patil reference exhibits every element of rejected claims 1 and 2, as presented in such claims.

The Patil Reference

The Patil reference is generally drawn to an apparatus to decouple core circuits power supply from input/output circuits power supply in a semiconductor device package. In this regard, the Patil reference discloses a semiconductor package substrate (504) having one pair of biplanar conductive planes (524a, b) and another pair of biplanar conductive planes (524c, d)

(see Abstract, col. 8, lines 40-51; col. 9, lines 8-36; and Fig. 5A). It is clear from the description of the assembly 500 that the substrate core (or, foundation) is dielectric material 506.

In contrast to the dielectric substrate core, rejected claim 1 of the pending application is directed to an integrated circuit (IC) package comprising, in part, *a metal substrate core*. Those skilled in the art of, for example, semiconductors and semiconductor processing will appreciate that a substrate core is technically different from a plane. According to one definition, the core is the base (or, foundation) material for the integrated circuit and is typically a non-conducting, or semiconducting material. A layer, or plane is typically added to the substrate core.

In the case of the Patil reference, several different steps of adding conductive and non-conductive planes to the semiconductor substrate core are performed to create the multiple, electrically isolated conductive planes. In this regard, the Patil reference is typical of the prior art described in the background of the pending application, where a substrate core of fiberglass or some other dielectric is employed, and conductive layers or planes are added thereto. In this regard, the Patil reference actually teaches away from that which is claimed in, e.g., rejected claim 1.

Insofar as the Patil reference fails to disclose an integrated circuit comprising a metal substrate core as claimed, for example in rejected claim 1, Applicant respectfully submits that the Action has failed to provide a prima facie basis for a §102(b) rejection and, as such, respectfully requests that the rejection of claim 1 be withdrawn.

Applicant notes that claim 2 is dependent on patentable base claim 1 and is similarly patentable over the Patil reference by virtue of at least such dependency. Accordingly, Applicant respectfully requests that the §102(b) rejection of claim 2 be withdrawn.

§103 Rejection

In **paragraphs 8 and 9** of the Action, claims 3-15 were rejected as being obvious over the Patil reference in further view of a patent issued to Ahn et al. (USP 6,432,724), under 35 USC §103(a). In response, Applicant respectfully traverses the rejection of such claims.

In particular, Applicant notes that independent claims 6 and 12 are each directed to an integrated circuit comprising, in part, a metal substrate core. As provided above, the Patil reference fails to disclose or suggest the use of a metal substrate core, as that term is widely accepted in the art.

Applicant notes that the Ahn reference is not cited as curing and does not, in fact, cure the above identified limitations of the Patil reference. Thus, without adopting the characterization of the Ahn reference or the appropriateness of the proposed combination in the Action, Applicant respectfully submits that the combination of the Patil and Ahn reference fails to disclose or suggest at least the required element of a metal substrate core. Insofar as the cited references fail to disclose or suggest that which is claimed in claims 6 and 12, Applicant respectfully submits that the claims 6 and 12 are patentable over the cited combination of references and, as such, respectfully requests that the §103(a) rejection thereof be withdrawn.

With respect to claim 3-5, 7-11 and 12-15, Applicant notes that such claims depend from patentable base claims 1, 6 or 12, respectively and are similarly patentable by virtue of at least such dependency. Accordingly, Applicant respectfully requests that the §103(a) rejection of claim 3-5, 7-11 and 12-15 be withdrawn.

CONCLUSION


In light of at least the foregoing remarks, Applicant respectfully submits that claims 1-15 are in condition for allowance and earnestly requests prompt notice thereof. Applicant

respectfully invites the Examiner to contact the undersigned representative for a telephone conference if it determined that such a conference could lead to allowance of one or more of the pending claims.

Respectfully submitted,
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